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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,213	08/16/2005	Masayoshi Ishikawa	046124-5327	4468

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EXAMINER

CORBETT, JOHN M

ART UNIT PAPER NUMBER

2882

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/510,213	Applicant(s) ISHIKAWA ET AL.	
	Examiner John M. Corbett	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6,7,11,15,19 and 23 is/are allowed.
- 6) ☒ Claim(s) 1-5,8-10,12-14,16-18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haendle (4,722,097) in view of Aufrichtig et al. (6,359,961).

With respect to claims 1 and 3-5, Haendle teaches an apparatus and method comprising a storage means (9) which stores, beforehand, an initial image (first image) of a subject (3) to be imaged engraved with a given pattern (in 9), said initial image having been imaged by an X-ray inspection apparatus having said X-ray tube (2) with a focal diameter of an electron beam at a target of said X-ray tube adjusted so as to be a predetermined value (Col. 1 line 54) and an imaging device (4);

acquisition means (10) which acquires a test image (second image) of said subject to be imaged that is imaged at a time said X-ray inspection apparatus adjusts the focal diameter (Col. 1 line 57); and

presentation means (13) which presents said initial image stored in said storage means (Fig. 2 (a)) and said test image (Fig. 2 (b)) acquired by said acquisition means in a comparable manner (Fig. 2 (c)).

Haendle fails to teach a telecommunications line.

Aufrichtig et al. teaches a telecommunications line. (Col. 7 line 7-9 and Col. 8 lines 18-25)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus and method of Haendle to include the telecommunications line of Aufrichtig et al., since a person would have been motivated to provide easier access to skilled operators (Col. 2 line 2-6) as taught by Aufrichtig et al.

With respect to claim 2, Haendle further teaches operation means that manipulates a focus lens, which adjusts a beam diameter of the electron beam in said X-ray tube. (17 and 18)

2. Claims 8-10, 12-14, 16-18 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (The Modulation Transfer Functions of X-ray Focal Spots) in view of Gravelle et al. (6,233,349) and Aufrichtig et al.

With respect to claims 12-14, Rao et al. teaches an apparatus and method comprising an image (Fig. 2) of a subject (slit, Fig. 1) to be imaged engraved with a given pattern (slit, Fig. 1), said image having been imaged by an X-ray inspection apparatus (Fig. 1) having said X-ray tube (Fig. 1) with a focal diameter of an electron beam at a target of said X-ray tube adjusted so as to be a predetermined value (initial setting applied to X-ray tube) and an imaging device (cassette, Fig. 1).

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Rao et al. fails to teach a storage means which stores, beforehand, an initial image, an acquisition means which acquires a test image of said subject to be imaged that is imaged at a time said X-ray inspection apparatus adjusts the focal diameter; and

presentation means which presents said initial image stored in said storage means and said test image acquired by said acquisition means in a comparable manner and a telecommunications line.

Gravelle et al. teaches a storage means (14) which stores, beforehand, an initial image (Col. 2 lines 20-21, image (1)), an acquisition means (12) which acquires a test image (Col. 2 lines 22-24, image (3)) of said subject to be imaged that is imaged at a time said X-ray inspection apparatus adjusts the focal diameter (Col. 2 lines 23-24); and

presentation means (12) which presents said initial image stored in said storage means and said test image acquired by said acquisition means in a comparable manner (Col. 2 lines 27-29 and Col. 5 lines 61-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus and method of Rao et al. to include the storage, acquisition and presentation means of Gravelle et al., since a person would have been motivated to make such a modification to improve quality standards of assessing focal spot images by means of an automated process (Col. 1 lines 49-55 and lines 65-67) as taught by Gravelle et al.

Aufrichtig et al. teaches a telecommunications line. (Col. 7 line 7-9 and Col. 8 lines 18-25)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate into the apparatus and method of Rao et al. as modified above to

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include the telecommunications line of Aufrichtig et al., since a person would have been motivated to make such a modification to provide easier access to skilled operators (Col. 2 line 2-6) as taught by Aufrichtig et al.

With respect to claims 8-10, Rao et al. as modified above suggests the apparatus and method as recited above. Gravelle et al. further teaches an exemplary display produced on a presentation means (16) of the scanned image (Current or test image) (Col. 3 lines 13-20 and Fig. 2). Gravelle et al. additionally teaches software in a computer (Col. 4 lines 21-37).

Rao et al. as modified above fails to explicitly teach wherein the presentation means presents the initial image at the same time as it presents the test image.

However, the Examiner takes Official Notice of operating systems allowing for multiple windows to open on a presentation means. Operating systems include but are not limited to one of Windows 95, Unix (multiple versions) or Linux.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate into the apparatus and method of Rao et al. as modified above to include an operating system that supports multiple windowing, since the Examiner takes Official Notice that modifying the program of Gravelle et al. to operate on an operating system that supports multiple windowing involves no more than ordinary skill in the art. A person would have been motivated to make such a modification to more easily compare the initial image and the test image by viewing them at the same time on the same presentation means.

With respect to claims 16-18, Gravelle et al. further teaches wherein the presentation means presents a luminance corresponding to the pattern of the subject to be imaged (Col. 3 lines 59-67, Col. 5 lines 36-46 and Fig. 2).

With respect to claims 20-22, Gravelle et al. further teaches wherein the presentation means presents a luminance corresponding to the lines of the slit plate (Col. 3 lines 59-67, Col. 5 lines 36-46 and Fig. 2).

Allowable Subject Matter

3. Claims 6-7, 11, 15, 19 and 23 are allowed. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 6, the prior art fails to teach or fairly suggest an X-ray tube adjusting method including an imaging step at which an X-ray inspection apparatus images a test image of a subject to be imaged at a time parts of an X-ray tube are replaced and a presentation step at which an initial image associated with identification information of an X-ray tube is acquired from a storage means and presented in such a manner as to be comparable with a test image, in combination with the all the claim limitations. Claims 7, 11, 15, 19 and 23 are allowed by virtue of their dependency.

Response to Arguments

4. Applicant's arguments with respect to claims 8-10, 12-14, 16-18 and 20-22 have been considered but are moot in view of the new ground(s) of rejection.
5. Applicant's arguments filed 12 July 2006 have been fully considered but they are not persuasive.

With regards to claims 1, 3 and 4, in response to the applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "adjusted until an individual in the maintenance staff is able to obtain a desired image.") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant further argues that the "modifying", "switching" and "changing" of the focuses of Haendle is not an adjustment since it is made between two generally described magnitudes, small to large. The Examiner disagrees. The Applicant is directed to Page 7 lines 4-9 of the Specification, which states that the initial image is obtained "in a state where the focal diameter of an electron beam at a target of the X-ray tube is *adjusted so as to be a predetermined value*". Therefore it is the position of the Examiner that the "modifying", "switching" and "changing" of the focuses of Haendle from the first image (initial image) to the second image (test image) satisfies the "apparatus adjusts the focal diameter" requirement as claimed in claims 1, 3 and 4.

Applicant's arguments are not persuasive and Haendle et al. still applies as prior art in the claim rejections above.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Corbett whose telephone number is (571) 272-8284. The examiner can normally be reached on M-F 8 AM - 4:30 PM.

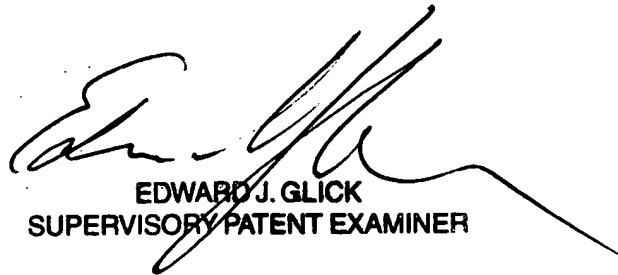
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

16 October 2006

Jmc

OK


EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER